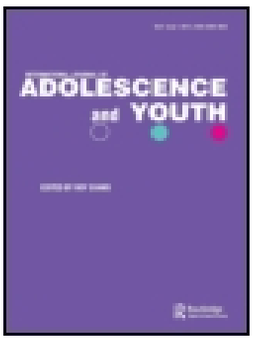

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The impact of parental, peer and school attachment on the psychological well-being of early adolescents in Thailand

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ABSTRACT

Secure attachment in childhood and adolescence is important to psychological well-being throughout the life span. This cross-sectional study examines the importance of attachment (i.e. parents, peers and school) and self-esteem on the psychological well-being (i.e. total psychological difficulties, externalizing problems, internalizing problems, prosocial behaviours and life satisfaction) among 1360 adolescents (aged 12–15 years) in a district of Central Thailand. Participants completed a self-administered questionnaire during school hours. Path analyses investigated the significance of attachment on psychological well-being and the mediating role of self-esteem. Parental and peer attachment were negatively associated with total psychological difficulties, externalizing problems and internalizing problems, while parental and school attachment were positively associated with life satisfaction. More secure peer and school attachment were significantly associated with greater prosocial behaviours. Self-esteem was found to mediate the relationships between attachment and all domains of psychological well-being except prosocial behaviours.

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KEYWORDS
Psychological well-being; early adolescence; attachment; self-esteem

Introduction

According to attachment theory, childhood experiences of attachment to a primary caregiver are vital to children's development of self-reliance and their ability to develop positive relationships as they age (Ainsworth & Bowlby, 1991). When the caregiver responds appropriately to their child's needs, the child develops an internal working model of the self as valued and reliable. However, if the caregiver refuses the child's need for comfort and exploration, the child sees himself as unworthy or incompetent (Bretherton, 1992). Attachment theory has been largely upheld by research. Positive relationship between family members and children has been associated with more positive psychological well-being during childhood (Bradshaw, 2012). For example, youth who self-report secure attachment to their parents have been found to high levels of self-esteem and social support (Cyranowski, Frank, Young, & Shear, 2000), and life satisfaction (Armsden & Greenberg, 1987). Conversely, youth who report insecure attachment to parents display greater conduct problem, inattention, depression (Raja, McGee, & Stanton, 1992) and lower self-esteem (Cyranowski et al., 2000).

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As children grow into adolescence, relationships they form with individuals outside of their families become important to psychological well-being. The interplay between family, peer, school and community attachment, and other social support has been found to be associated with well-being (Gerard & Buehler, 2004; Jose, Ryan, & Pryor, 2012; McGrath, Brennan, Dolan, & Barnett, 2009). Caregiver–adolescent relationships, mediated by adolescent self-concept, have been found to be significant in adolescents' ability to develop positive social relationships outside the family (Deković & Meeus, 1997). More family support has also been positively associated with adolescent friendship quality (Franco & Levitt, 1998). Among children at grades 6–8, positive relationships with adult family members as well as peers were important to positive psychological development (Buchanan & Bowen, 2008).

In Thailand, attachment studies have mostly focused on relationships between mother and child age 0–3 years (Phonyotin, 1993; Williams et al., 2003; Yimyam, 1998; Yimyam & Morrow, 1999; Youngblut, Singer, Madigan, Swegart, & Rodgers, 1998). Studies found that Thai preschoolers could develop secure attachment but more dependency when comparing to the US children (Phonyotin, 1993); however, verbal communication between Thai mothers and their children was rarely found (Williams et al., 2003). Additionally, the study on the impact of parental and social attachment among young people in Thailand has been in moderate progress in particular those at age of early adolescence. So this study aims to provide evidence on the relationships between attachment to parent, peer as well as school and psychological well-being among Thai youth. While they are socially connecting to others, they develop their own coping skills. Better attachment is expected to support greater well-being and to be a barrier of psychological difficulties among early adolescents.

Self-esteem has been found to act as a protective factor against internalizing and externalizing problems including depression, suicide tendencies, eating disorders, anxiety, violence and substance abuse (Mann, Hosman, Schaalma, & de Vries, 2004). However, high self-esteem may reflect real-life experiences but instead refers to an inflated, arrogant, grandiose, unwarranted sense of conceited superiority over others (Baumeister, Campbell, Krueger, & Vohs, 2003). The articles (Baumeister et al., 2003; Pyszczynski, Greenberg, Solomon, Arndt, & Schimel, 2004) highlight that many studies of self-esteem are based on Western individualist culture, and its import may not be as pronounced in a country with a more collectivist culture where childrearing is a responsibility of the extended family. The nature of intergeneration family which includes parents, children, grandparents and other family members is widely seen in Thai society especially in rural areas. So we propose to examine the advantage of intergeneration family on improvement of psychological aspects of children. Last but not least, self-esteem among youth in either nuclear family or intergeneration family is interesting to investigate the effect on the relationships between attachment to parent, peer as well as school and their psychological development. This study could identify the impact of relationships between parental, peer and school attachment, self-esteem and psychological well-being among early adolescents in collective culture as Thailand.

Method

Study design

A cross-sectional survey was conducted among 1396 adolescents aged 12–15 years attending four secondary schools in Phanat Nikhom, a district in Central Thailand between December 2014 and January 2015. A self-administered questionnaire was completed during class time which addressed parental, peer, school attachment and psychological well-being. The study was approved by the Institutional Review board (IRB) of the Institute for Population and Social Research (IPSR), Mahidol University, Thailand (COA. No. 2014/1-1-35).

Study setting and population

The study was conducted in Phanat Nikhom, a suburban district in the Chon Buri province of Central Thailand. The district was chosen for its similarity to the national demographic composition (Official

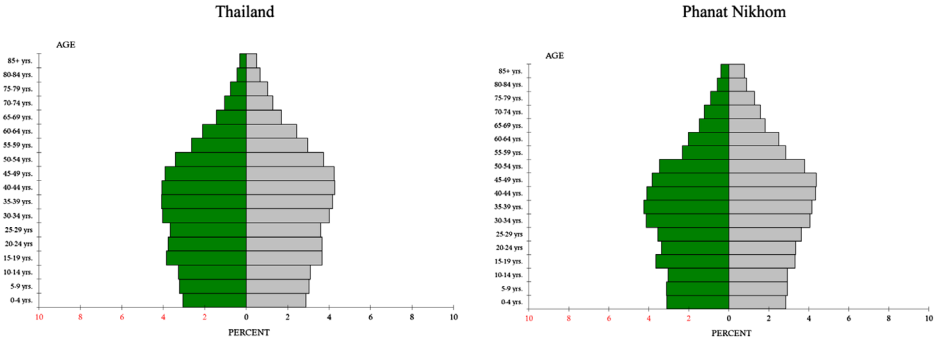

Figure 1. Population pyramids of Thailand and Phanat Nikhom, respectively (Official statistics registration systems, D. o. p. a, 2013).

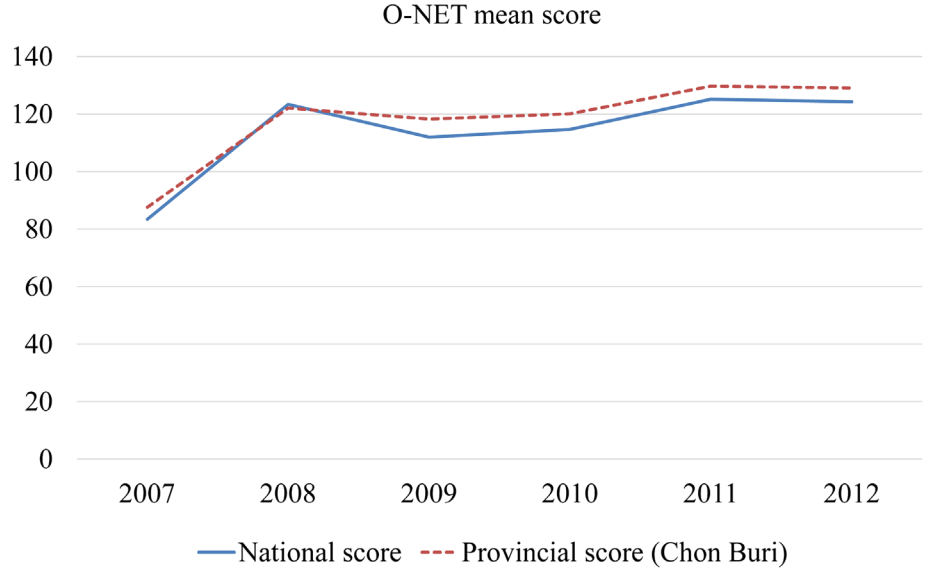

Figure 2. Mean score of ordinary national education test (O-NET) among students in the 6th, 9th and 12th grades between the years 2007 and 2012 (Office of Data & Social Indicators Development, N. I. o. E. T. S., 2014).

Statistics Registration Systems, D. o. p. a, 2013; see Figure 1) and mean ordinary national education test (O-NET) scores (Office of Data & Social Indicators Development, N. I. o. E. T. S., 2014; see Figure 2). In 2013, the population of Phanat Nikhom was 97,306 of which 4.87% were aged between 12 and 15 years (Official Statistics Registration Systems, D. o. p. a, 2013). Four schools provide secondary education within the district. During the 2014 academic year, there were 2536 students (57.10% female) in 60 classes enrolled in grades 7–9.

Recruitment and consent procedures

Thirty-six of the 60 grade 7–9 classes were randomly selected to participate in the study. School directors and teachers from selected classes were contacted to take part in the study and agreed to participate. All eligible students were given a study information sheet and a consent form to give to their primary caregivers. Adolescents were informed that their participation was entirely voluntary before completing the self-assessment during class time.

Measurements

Demographic information

Demographic information included individual and household characteristics such as age, gender, number of siblings and the presence of at least one parent in household. Intergeneration family referred to the presence of at least one grandparent in household.

Psychological well-being

The Strengths and Difficulties Questionnaire (SDQ, Goodman, 1997) was used to assess total psychological difficulties, externalizing problems, internalizing problems and prosocial behaviours (see Table 1). The SDQ consists of 25 items which assess well-being across five subscales: (A) emotional symptoms; (B) conduct problems; (C) hyperactivities; (D) peer problems; and (E) prosocial behaviours. Each subscale consists of five items measured using a three-point Likert scale ranging from 'not true' (0) to 'certainly true' (2). Scores are then tabulated across three domains: (1) externalizing problems (sum of conduct problems and hyperactivities subscales); (2) internalizing problems (sum of emotional symptoms and peer problems subscales); (3) prosocial behaviours (sum of prosocial behaviours subscales). A total difficulties score is derived from the externalizing and internalizing problems domain scores. Higher total difficulties, externalizing problems and internalizing problems scores indicate poorer functioning. Higher prosocial behaviours scores indicate better functioning.

Life satisfaction was assessed using the Students' Life Satisfaction Scale (SLSS) (Huebner, 1991). The SLSS is a seven-item measure which assesses global life satisfaction (see Table 1). Each item is scored on a six-point Likert scale ranging from 'strongly disagree' (1) to 'strongly agree' (6). Two items are reversed scored. Item scores are summed to create an overall life satisfaction score where higher scores represent greater satisfaction.

Attachment

Attachment to primary caregiver (i.e. parents) and peers was assessed using the Inventory of Parent and Peer Attachment – Revised (IPPA-R) for Children (Gullone & Robinson, 2005). The IPPA-R contains 53 statements which the adolescent rates on a three-point scale ranging from 'never true' (1) to 'always true' (3; see Table 1). Items negatively worded are reverse scored. Individual scores are summed to determine an overall score where higher scores represent greater attachment.

School attachment was assessed using the School Connectedness Scale (Jose et al., 2012). The six-item scale assesses youth's perception of school membership and relationships with teachers. Each item is rated using a five-point scale ranging from 'strongly disagree' (1) to 'strongly agree' (5; see Table 1). Individual scores are summed to determine an overall score where higher scores represent greater attachment.

Table 1. Description of assessment measures.

Variables	Measures	Items	Range	Internal consistency (Cronbach's α)
Total psychological difficulties	Strengths and Difficulties Questionnaire (SDQ)	20	0–40	.70
Externalizing problems	SDQ	10	0–20	.61
Internalizing problems	SDQ	10	0–20	.58
Prosocial behaviours	SDQ	5	0–10	.61
Life satisfaction	Students' Life Satisfaction Scale	7	7–42	.72
Parental attachment	Inventory of Parental and Peer Attachment – Revised (IPPA-R) for children	28	28–84	.88
Peer attachment	IPPA-R for children	25	25–75	.85
School attachment	School Connectedness Scale	6	6–30	.77
Self-esteem	Rosenberg Self-Esteem Scale	10	0–30	.73

Self-esteem

Global self-esteem was assessed using the Rosenberg Self-Esteem Scale (Rosenberg, 1965). The scale consists of 10 items answered using a four-point Likert scale ranging from 'strongly disagree' (0) to 'strongly agree' (3; see Table 1). Five negatively stated items are reversed scored. Individual scores are summed to determine an overall score where higher scores represent greater self-esteem.

Translation and validation of measures

Assessment measures not previously translated (i.e. the Strengths and Difficulties Questionnaire, the Students' Life Satisfaction Scale, the Inventory of Parent and Peer Attachment – Revised and the Rosenberg Self-Esteem Scale) were translated into Thai and evaluated by psychology experts for face validity. All measures were assessed for internal consistency (Cronbach's alpha). Good internal consistency ($\alpha > .7$) was found for the majority of variables (see Table 1).

Analysis

Pearson correlations were employed to assess the relationship between attachment, self-esteem and domains of psychological well-being (total difficulties, externalizing problems, internalizing problems, prosocial behaviours and life satisfaction). *T*-test was used to test the mean differences on domains of psychological well-being across gender and intergeneration family.

The impact of attachment on psychological well-being and the role of self-esteem on the relationships between attachment and psychological well-being were evaluated using path diagrams. Initial models included three paths of attachment from parent, peer and school on domains of psychological well-being. Self-esteem was then added as a mediator and gender and intergeneration family were included as potential confounding variables. Three fit indices, Chi-square test (χ^2), Comparative Fit Index (CFI), and Root Mean Square Error of Approximation (RMSEA), were used to determine model fit according to recommendations (Stage, Carter, & Nora, 2004). Firstly, χ^2 values were used to assess the overall fit of the model with non-significant values indicating good fit. Then the CFI was used to test the comparison of the hypothesized model and the independence model where CFI value of .95 or higher indicates good fit (Byrne, 2010). Lastly, the RMSEA was used to determine the error of approximation between the populations. An RMSEA value of less than .05 indicates good fit (Browne & Cudeck, 1992). Path analysis was conducted using AMOS version 22.

Missing data

Missing data for each variable ranged from .74% ($n = 10$; peer attachment) to 1.25% ($n = 17$; self-esteem). Variables with missing data were dummy coded (1 = missing; 0 = non-missing), and used to examine their relationship to other variables using *t*-tests and/or cross-tabulation. No significant relationships were found. As the percentage of missingness was quite small and the missing data did not relate to other variables, a traditional method such as case deletion method was deemed not to reduce the power of estimation, or bias the sample (Acock, 2005; Schlomer, Bauman, & Card, 2010). Therefore, the listwise method was considered appropriate.

Results

One thousand and three hundred and ninety-six students completed the questionnaire (86.76% of the total target samples). There were 16 questionnaires determined to exclude as error completion. Twenty participants (1.43%) were excluded from the analysis as they were aged over 15 years. As a result, 1360 participants are included in the analysis (61% female). Mean age of participants was 13.74 (SD = .94).

Just over a quarter of adolescents currently lived with at least one grandparent (27.1%). The majority (90.1%) of adolescents reported that they lived with their parents in household.

Males were likely to report higher levels of externalizing problems than females ($t = 3.291$, $p < .01$), while females were likely to exhibit more prosocial behaviours than males ($t = -5.168$, $p < .001$). Participants living with at least one grandparent in their household were likely to have greater life satisfaction ($t = 3.063$, $p < .01$) and self-esteem ($t = 2.031$, $p < .05$) than those living without a grandparent in the house. Presence of at least one parent in household was not significantly associated with any domains of psychological well-being or self-esteem (see Table 2).

Path analyses were used to examine the impact of attachment on psychological well-being and the role of self-esteem on relationships between attachment and psychological well-being. Model fit statistics of the initial models indicated poor fit. Tests of the missing paths in the initial models indicated that five additional paths would significantly contribute to the model: gender (male) on parental attachment, gender (male) on peer attachment, gender (male) on school attachment, gender (male) on self-esteem and intergeneration family on school attachment. Thus, the revised models were generated and had statistically good fit (see Table 3).

Path diagrams demonstrate the relationships among the variables and standardized path coefficients indicate direct and indirect effect of attachment and psychological well-being (see Table 4). Males were likely to report higher levels of self-esteem than females ($\beta = .527$, $p < .01$). Being male was also associated with poorer parental and peer attachment ($r = -.08$, $p < .05$; $r = -.26$, $p < .001$, respectively). Attachment to parents, peers and school was positively associated with self-esteem ($\beta = .201$, $p < .001$;

Table 2. Descriptive statistics and correlation between determinants and outcomes.

	Correlation coefficients				
	Total difficulties ($n = 1360$)	Externalizing problems ($n = 1360$)	Internalizing problems ($n = 1360$)	Prosocial behaviours ($n = 1360$)	Life satisfaction ($n = 1348$)
Gender ($n = 1360$; male = 530)	.051	.089**	−.001	−.138***	.021
Intergeneration family($n = 1360$; living with grandparents = 368)	−.012	−.006	−.013	.050	.079**
Presence of parents in household($n = 1360$; presence = 1226)	−.047	−.034	−.045	−.041	−.020
Age ($n = 1360$; mean= 13.74; SD = .94)	.010	.007	.010	.008	−.031
Self-esteem ($n = 1343$; mean = 27.82; SD = .90)	−.476***	−.332***	−.459***	.190***	.572***
Parental attachment ($n = 1346$; mean = 65.24; SD = 8.14)	−.391***	−.314***	−.337***	.198***	.456***
Peer attachment ($n = 1350$; mean = 56.62; SD = 6.79)	−.300***	−.218***	−.281***	.328***	.254***
School attachment ($n = 1352$; mean = 21.88; SD = 3.76)	−.186***	−.188***	−.124***	.313***	.350***
Mean	14.12	6.82	7.30	6.23	28.51
SD	4.81	2.81	2.96	1.68	5.05

*$p < .05$.; **$p < .01$; ***$p < .001$

Table 3. Fit indices of path models.

	χ^2		CFI		RMSEA	
	Initial (df = 9)	Final (df = 4)	Initial	Final	Initial	Final
Total difficulties	123.022 ($p = .000$)	5.683 ($p = .224$)	.916	.999	.098	.018
Externalizing problems	123.022 ($p = .000$)	5.683 ($p = .224$)	.901	.999	.098	.018
Internalizing problems	123.022 ($p = .000$)	5.683 ($p = .224$)	.913	.999	.098	.018
Prosocial behaviours	123.022 ($p = .000$)	5.683 ($p = .224$)	.904	.999	.098	.018
Life satisfaction	123.022 ($p = .000$)	5.683 ($p = .224$)	.928	.999	.098	.018

Table 4. Direct and indirect effects of attachment and psychological well-being.

	Total difficulties		Externalizing problems		Internalizing problems		Prosocial behaviours		Life satisfaction	
	Direct	Indirect	Direct	Indirect	Direct	Indirect	Direct	Indirect	Direct	Indirect
Parental attachment	−.167	−.148	−.158	−.089	−.122	−.156	.022	.009	.185	.175
Peer attachment	−.0130	−.065	−.063	−.039	−.152	−.068	.233	.004	.035	.077
School attachment	.022	−.049	−.048	−.030	.081	−.052	.238	.003	.143	.059

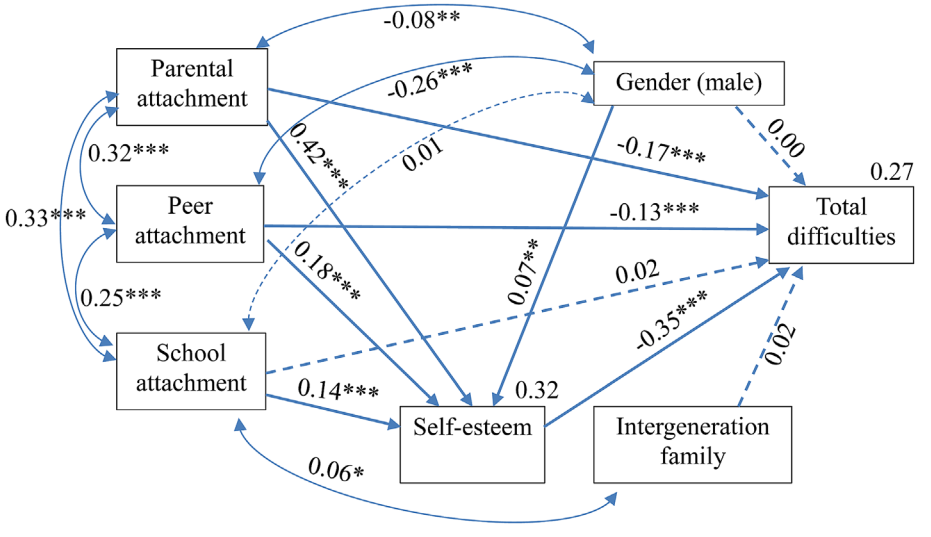

Figure 3. Maximum likelihood estimates for the model using total psychological difficulties of early adolescence (final models).

$\beta = .105$, $p < .001$; $\beta = .146$, $p < .001$, respectively). The amount of variance accounted for self-esteem by attachment from parent, peer, school and gender (male) was 32.4%. Parental attachment was positively associated with peer attachment ($r = .32$, $p < .001$) and school attachment ($r = .33$, $p < .001$). Peer attachment was positively associated with school attachment ($r = .25$, $p < .001$).

Attachment and total psychological difficulties

Self-esteem was found to mediate the relationship between attachment and total psychological difficulties (see Figure 3). Attachment to parents, peers and school had a significant impact on self-esteem, which in turn was related to lower total psychological difficulties. Standardized path coefficients indicated the greatest direct effect of parental attachment on total difficulties ($\beta = -.099$, $p < .001$). Moreover, it acted indirectly via self-esteem and the indirect effect of parental attachment on total psychological difficulties was also significant. Peer attachment was found to be the second most important factor in relation to total psychological difficulties ($\beta = -.092$, $p < .001$), but it had slightly indirect effect through self-esteem. School attachment was not significantly associated with total psychological difficulties ($\beta = .028$, $p = .386$).

Attachment and externalizing problems

Path diagram showed the mediation of self-esteem on relationships between attachment and externalizing problems (see Figure 4). Standardized path coefficients found parental attachment to have the

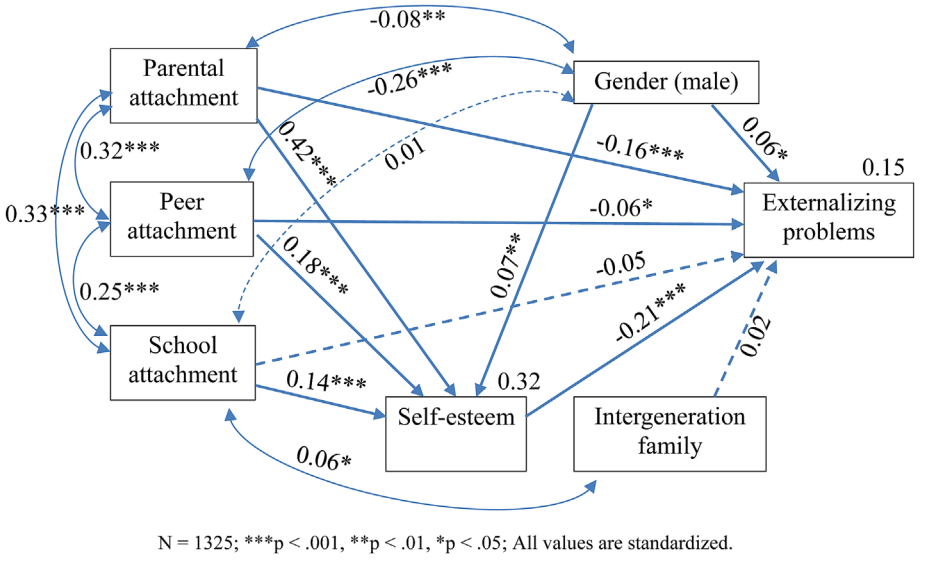

Figure 4. Maximum likelihood estimates for the model using externalizing problems of early adolescence (final models).

largest direct effect on externalizing problems ($\beta = -.054$, $p < .001$), but it had just a minor indirect effect via self-esteem. Attachment to peers ($\beta = -.026$, $p < .05$) and school ($\beta = -.036$, $p = .083$) had small direct and indirect effects on externalizing problems. Males were likely to report higher levels of externalizing problems than females ($\beta = .355$, $p < .05$).

Attachment and internalizing problems

Peer ($\beta = -.066$, $p < .001$) and parental ($\beta = -.044$, $p < .001$) attachment were found to have the largest direct effect on internalizing problems (see Figure 5). Parental attachment acted indirectly via self-esteem, while attachment to peers and schools did to a lesser extent. Results indicated that school attachment had a direct influence on higher levels of internalizing problems ($\beta = .064$, $p < .01$), but it had an indirect effect through self-esteem to lower levels of internalizing problems. Males were likely to report lower levels of internalizing problems than females ($\beta = -.329$, $p < .05$).

Attachment and prosocial behaviours

Standardized path coefficients indicated attachment to school ($\beta = .106$, $p < .001$) and peers ($\beta = .057$, $p < .001$) had significant direct effects on prosocial behaviours. Parental attachment did not significantly influence prosocial behaviours ($\beta = .005$, $p = .465$). Males were likely to report lower levels of prosocial behaviour than females ($\beta = -.276$, $p < .01$). Self-esteem was not found to mediate these relationships (see Figure 6).

Attachment and life satisfaction

Parental ($\beta = .115$, $p < .001$) and school ($\beta = .193$, $p < .001$) attachment were significantly associated with life satisfaction (see Figure 7). Self-esteem was found to mediate the relationship between these relationships. Peer attachment was not found to predict life satisfaction ($\beta = .026$, $p = .156$). Males reported higher levels of life satisfaction than females ($\beta = .493$, $p < .05$) and those living with at least one grandparent in household had higher levels of life satisfaction than those not living with a grandparent ($\beta = .510$, $p < .05$).

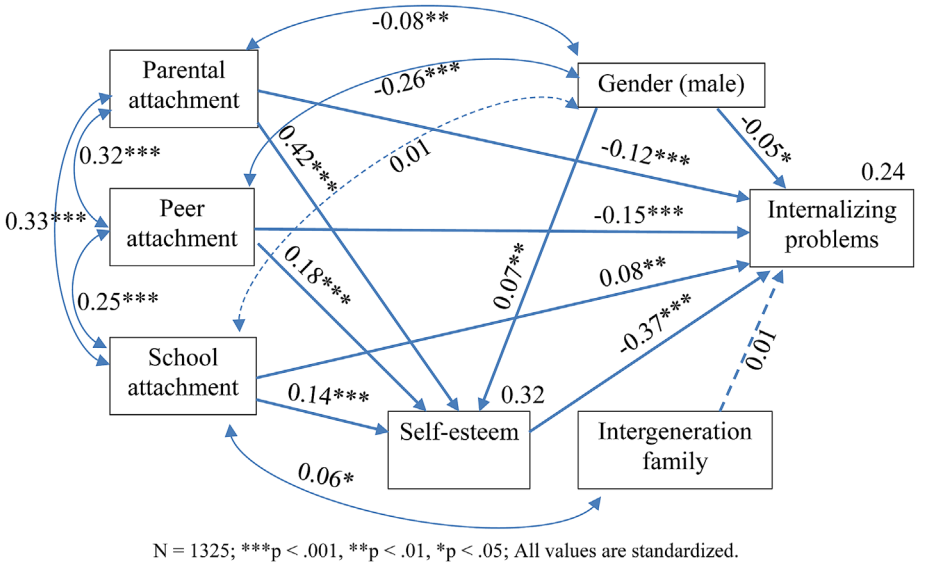

Figure 5. Maximum likelihood estimates for the model using internalizing problems of early adolescence (final models).

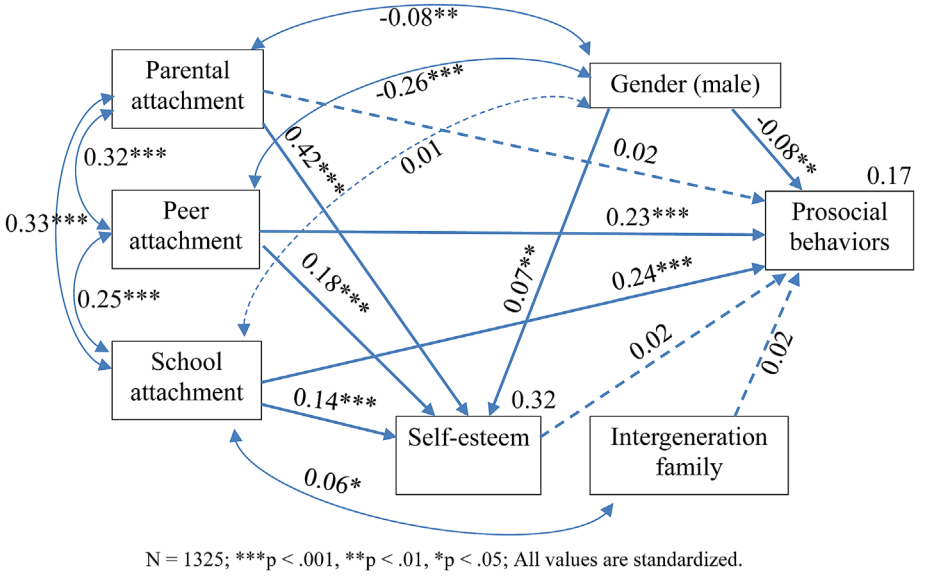

Figure 6. Maximum likelihood estimates for the model using prosocial behaviours of early adolescence (final models).

Discussions

The results of our study show the importance of parental, peer and school attachment to psychological well-being of early adolescents. Similar to previous research (Eriksson, Cater, Andershed, & Andershed, 2010; Laible, Carlo, & Raffaelli, 2000; Wentzel & McNamara, 1999), high levels of parental attachment were associated with fewer total psychological difficulties, externalizing problems and internalizing problems, but less important in the display of prosocial behaviours. Parental attachment was also predictive of life satisfaction. It would confirm that attachment behaviour is a major component of human behavioural

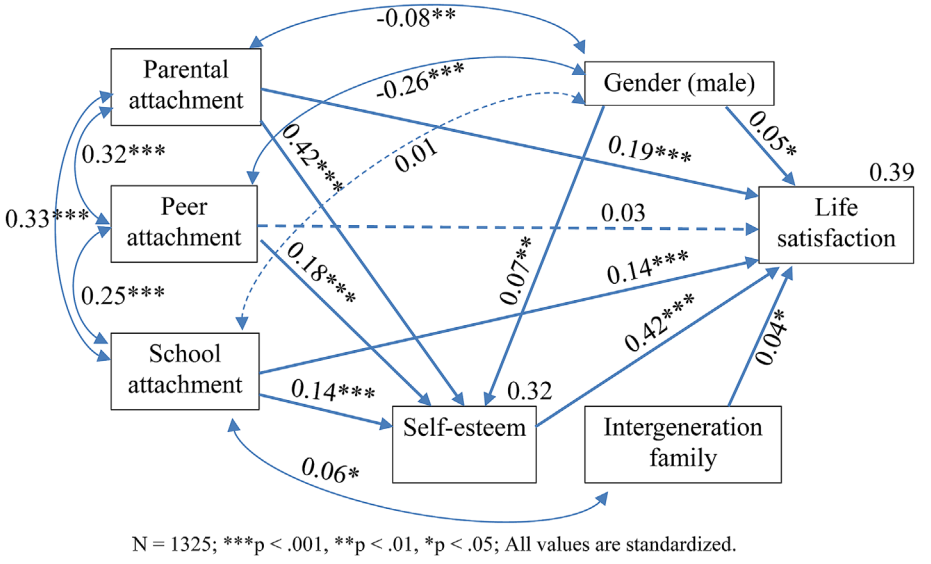

Figure 7. Maximum likelihood estimates for the model using life satisfaction of early adolescence (final models).

equipment and biological function which is not even important in childhood, but throughout life span. A previous study indicated that adults with insecure attachment were likely to link with psychological problems including loneliness, irritability, mental health and trait anxiety (Kafetsios & Sideridis, 2006).

There was significant mean difference of parental attachment between those living with at least one parent and those not living with their parents ($t = 2.887$, $p < .01$); however, our results found that presence of at least one parent in household was not significantly associated with any domain of psychological well-being or self-esteem. This could be explained by the role of peer and school attachment which partially supports psychological well-being of adolescents.

Greater peer attachment was predictive of lower total psychological difficulties, and externalizing and internalizing problems. School attachment was positively associated with life satisfaction. These findings support previous research which suggests that secure parental attachment provides a foundation for the development of positive relationships with peers and acts as a protective factor against negative life events experienced during the transitions into adolescence and adulthood (Cyranowski et al., 2000; Franco & Levitt, 1998; Karavasilis, Doyle, & Markiewicz, 2003). Despite an approach criticizing the individual role as compensatory model which mentions peers could refill the deficiency of parental relation (Laible et al., 2000), some studies indicated that high peer support could not replace the low adult support in terms of contributing psychological well-being (Buchanan & Bowen, 2008; Raja et al., 1992). Our study confirms the previous findings of the positive effect of adult support (e.g. parents, teachers, other adults) on youths' adjustment during transition to adolescence (Levitt et al., 2005; Scales, Benson, & Mannes, 2006; Way & Robinson, 2003). Our results also support recent studies which highlighted the interaction between the roles of parent, peer and school in predicting adolescent's mental health outcomes (Oldfield, Humphrey, & Hebron, 2015) and life satisfaction (Suldo, Thalji-Raitano, Hasemeyer, Gelley, & Hoy, 2013).

Peer and school attachment were found to directly influence adolescents' prosocial behaviours. This finding is in line with previous research. Oldfield and Hebron (2015) reported a significant positive impact of peer and school attachment on prosocial behaviours in a study of adolescents aged 11–16 years. As a child grows into adolescence, his family is likely to play less of a role in socialization due to reduced contact. Instead, peers and school become more important in shaping behaviour. A recent study indicated that perspectives on caring, sharing and reciprocal behaviours could be contributed by

social support from teachers and classmates (Plenty, Östberg, & Modin, 2015). In a study of Wenzel and McNamara, greater peer acceptance was found to be directly associated with more prosocial behaviours (Wentzel & McNamara, 1999). The authors concluded that peer and school attachment could be the most important predictors of adolescent social skills, particularly prosocial behaviours.

Our finding of a positive association between school attachment and internalizing behaviours contradicts those of previous studies (Bond et al., 2007; Denny et al., 2011; Kuperminc, Leadbeater, & Blatt, 2001; Shochet, Dadds, Ham, & Montague, 2006). The reason for this contradiction may be explained by the instrument used to assess school attachment or confounding variables not included in the analyses. There may be several confounding variables which may mediate the relationship between school attachment and internalizing behaviours. For example, teacher well-being has been found to be negatively associated with students' depressive symptoms (Denny et al., 2011).

Results from our study confirm the previous ones which indicated that quality of attachment was associated with development of self-esteem and psychological well-being (Armsden & Greenberg, 1987; De Bruyn & van den Boom, 2005; Deković & Meeus, 1997) and self-esteem was related to reducing externalizing and internalizing problems (e.g. depressive symptoms, social anxiety, suicide tendency and violence; Isomaa, Väänänen, Fröjd, Kaltiala-Heino, & Marttunen, 2013; Mann et al., 2004; Williams et al., 2003). Parental attachment was found to be a greatest influence on adolescent self-esteem which is in the line with findings of a study among Thai youth (Tuicharoen, Sangchai, Suparp, & Srisorrachatr, 1998). Furthermore, our results indicate that self-esteem plays a mediating role in the relationship between attachment and psychological well-being. However, it did not affect prosocial behaviours. This finding is consistent of (Smith, Walker, Fields, Brookins, and Seay, 1999) who found that self-esteem had a very small direct effect on prosocial behaviours, but self-efficacy was a mediator of the relation between self-esteem and prosocial behaviours in a survey of 100 American adolescents. An earlier study suggested that self-representation was a mediator between the interaction of intellectual ability and self-esteem and social behaviour (Brown & Smart, 1991).

Our results are consistent with the previous studies which found male adolescents were likely to have higher levels of externalizing problems than females (Kuperminc et al., 2001; Véronneau & Dishion, 2010), and female adolescents tended to have more internalizing problems (Kuperminc et al., 2001; Sourander, Helstelä, & Helenius, 1999) and exhibited greater prosocial (Rose & Rudolph, 2006) behaviours. In traditional Thai culture, daughters are expected to take care of their older parents in later adulthood, and adult daughters with couple would permanently stay in the same household with their own parents as extended family (Podhisita, 2011). As a result, daughters are more likely to have close relationships with their parents. We found female adolescents were positively related to parental attachment which is in line with the previous Thai research (Tuicharoen et al., 1998). In addition, our study indicated adolescents living with their grandparents in household tended to have higher levels of life satisfaction comparing to those living without a grandparent. This supports the previous study which claimed that good relationship with grandparents was the protective factor for positive development (Grizenko & Pawliuk, 1994) and also confirms the benefit of intergeneration family.

Strengths and limitations of the study

This study addresses a gap in our knowledge regarding the impact of attachment on psychological well-being in collectivist cultures. Our study's large sample size and sampling from a typical area of the Thai context strengthen the generalization of our findings to the rest of the country. However, this study is cross-sectional rather than longitudinal in nature. The interpretation on causal relationship amidst variables should be on caution, although the predictive causal relation among the variables was deduced from statistical operations.

It is notable that Cronbach's alpha coefficients on aspects of Strengths and Difficulties Questionnaire (SDQ) were found less than .7. Interpretation on each psychological domain should be made with caution; however, they are consistent with a previous study from the Department of Mental Health Thailand which surveyed a large number of Thai samples to validate the measure including parent- and

teacher-rated and self-report SDQ for children aged 11–16 years (Woerner, Nuanmanee, Becker, Wongpiromsarn, & Mongkol, 2011). The poor internal consistency of SDQ may be explained by a difference in cultural perspectives. It might be the mismatched perception between Western and Thai perspectives. For example, the item 'I get on better with adults than with people my own age' may not indicate poor attachment to peer as Thai culture supports relations between young people and older adults.

Nearly 10% of participants reported not currently living with a biological parent. This is not surprising as economic migration to large cities and abroad is common in Thailand. Furthermore, as the participants were not asked to disclose who their primary caregiver was, we are unable to say whether or not attachment to a biological parent is important to psychological development.

Implications and future research

The results of this and other studies confirm the importance of child–caregiver relationships. The use of parenting interventions such as Triple P and Incredible Years may be effective in improving these relationships. Further research is needed to evaluate the impact of a non-biological parent as primary caregiver on child and adolescents' psychological outcomes.

School-based interventions may be used to improve prosocial behaviours among students. School should be not only for academic attainment, but also for moral development among young people. For example, school should provide a timetable for community learning and sharing. Teachers should encourage their students by creating activities which support adolescents' spiritual and prosocial mind.

Future research should continue to explore the impact of attachment on youth psychological well-being in non-Western settings. The role of self-esteem and other confounding variables (e.g. self-efficacy, educational outcomes) in the relationship between attachment and psychological well-being in collectivist cultures is also an area for further research.

Conclusions

Empirical data from Thailand indicate that secure parental and peer attachment is significant to adolescent psychological well-being. Secure peer and school attachment are significantly associated with greater prosocial behaviours while parental and school attachment are positively associated with life satisfaction.

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